

Mq
UNITED STATES DEPARTMENT OF COMMERCE**United States Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/538,617 03/29/00 GRAHAM

G 36512/CAG/60

NM91/0829

EXAMINER

CRAIG A GELFOUND
CHRISTIE PARKER & HALE LLP
P O BOX 7068
PASADENA CA 91109-7068

PEREZ, R

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

08/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

DETAILED ACTION

Drawings

Figures 10b and 10c should be designated by a legend such as --Prior Art-- because only that, which is old, is illustrated. See MPEP § 608.02(g).

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Margrain et al. (U. S. Pat. 3,805,104).

Referring to claim 1, Margrain et al. disclose an inductive coil (12) for an electromotive device comprising:

a pair of concentric conductive sheet metal windings (A,R) separated by an encapsulating material (11), each of the windings (A,R) consisting of a plurality of axially extending conductive bands (A,R) each being separated from an adjacent conductive band by a space (see figure 2), each of the conductive bands (A,R) of one of the windings being coupled to one of the conductive bands of the other winding (see figure 1).

Referring to claim 9, Margrain et al. disclose that the conductive bands (A,R) of the one of the windings forms a half circuit (A in figure 1).

Referring to claim 10, Margrain et al. disclose that the conductive bands (A,R) of the other winding forms a complimentary half circuit (R).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 6-7 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margrain et al. in view of Lifschitz (U. S. Pat. 3,698,079).

Margrain et al. disclose an inductive coil as described on item 1 above. However, Margrain et al. do not disclose that the encapsulating material comprises polyimide. Margrain et al. do not disclose that each of the spaces separating the conductive bands is less than 2.5 times the thickness of each of the conductive bands. Margrain et al. do not disclose that each of the spaces between the conductive bands is about 1 - 1.5 times the thickness of each of the conductive bands. Margrain et al. do not disclose that each of the conductive bands having a tensile strength greater than 40,000 psi. Margrain et al. do not disclose that each of the conductive bands having a yield strength greater than 30, 000 psi. Margrain et al. do not disclose that each of the conductive bands having a hardness greater than a Brunell number of 70.

Lifschitz discloses that the encapsulating material comprises polyimide (column 2, lines 56-62). Lifschitz' invention has the purpose of providing an insulating base to the coils.

It would have been obvious at the time the invention was made to modify the inductive coil of Margrain et al. and provide it with the encapsulating material disclosed by Lifschitz for the purpose of providing an insulating base to the coils.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the coil dimensions as claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the material properties as claimed since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

3. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margrain et al. in view of Karol (U. S. Pat. 3,650,021).

Margrain et al. disclose an inductive coil as described on item 1 above. However, Margrain et al. do not disclose a non-conductive filament wrapped around an outer surface of the one of the windings. Margrain et al. do not disclose that the nonconductive filament comprises fiberglass. Margrain et al. do not disclose that a thickness of the non-conductive filament is about 0.00030-0.00075 inch.

Karol discloses a non-conductive filament (11) wrapped around an outer surface of the one of the windings (10). Karol discloses that the nonconductive filament comprises fiberglass (column 2, lines 1-2). Karol's invention has the purpose of supporting the windings.

It would have been obvious at the time the invention was made to modify the inductive coil of Margrain et al. and provide it with the fiberglass filament disclosed by Karol for the purpose of supporting the windings.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the filament with a thickness of about 0.00030-0.00075 inch since it has been held that where the general conditions of a claim are disclosed in

the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Margrain et al. in view of Toshiba (JP 05328678A).

Margrain et al. disclose an inductive coil as described on item 1 above. However, Margrain et al. do not disclose that each of the conductive sheet metal windings comprises precision machined and rolled copper.

Toshiba discloses that each of the conductive sheet metal windings (4) comprises precision machined and rolled copper (see abstract). The invention of Toshiba has the purpose of improving dimensional accuracy between the respective coils.

It would have been obvious at the time the invention was made to modify the inductive coil of Margrain et al. and provide it with the precision machined and rolled copper disclosed by Toshiba for the purpose of improving dimensional accuracy between the respective coils.

5. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margrain et al. in view of W. Angele (U. S. Pat. 3,209,187).

Margrain et al. disclose an inductive coil as described on item 1 above. Margrain et al. disclose a commutator having a plurality of current conducting segments, each of the segments being electrically coupled to one of the conductive bands. However, Margrain et al. do not disclose a flywheel coupled inside the windings adjacent the

commutator, and a shaft axially coupled inside the windings. Margrain et al. do not disclose that the flywheel comprises anodized aluminum.

W. Angele discloses a flywheel (66) coupled inside the windings (14) adjacent the commutator (28), and a shaft (16) axially coupled inside the windings (14). W. Angele's invention has the purpose of supporting the armature.

It would have been obvious at the time the invention was made to modify the inductive coil of Margrain et al. and provide it with the flywheel disclosed by W. Angele for the purpose of supporting the armature.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the flywheel of anodized aluminum since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

Application/Control Number: 09/538,617
Art Unit: 2834

Page 8

305 3432 for regular communications and (703) 305 3432 for After Final
communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 308
0956.

Guillermo Perez
August 22, 2001



NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000